CS-99-332B

February 9, 2004

To: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572
28 Davis Avenue
Poughkeepsie, N.Y. 12603

Subject: Serial No. 10/718,865 11/21/03

Simon Chooi et al.

A METHOD TO CREATE A COPPER DIFFUSION DETERRENT INTERFACE

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation In An Application.

The following Patents and/or Publications are submitted to comply with the duty of disclosure under CFR 1.97-1.99 and 37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 17, 2004.

Stephen B. Ackerman, Reg.# 37761

Signature/Date Stephen B. Ackerman 2/17/04

U.S. Patent 5,933,758 to Jain, "Method for Preventing Electroplating of Copper on an Exposed Surface at the Edge Exclusion of a Semiconductor Wafer", teaches a barrier layer over a dual damascene opening.

U.S. Patent 5,693,563 to Teong, "Etch Stop for Copper Damascene Process", discusses dual barrier layers in a dual damascene process.

U.S. Patent 5,451,542 to Ashby, "Surface Passivation Process of Compound Semiconductor Material Using UV Photosulfidation", teaches an S surface passivation process.

The following two U.S. Patents teach the use of a copper sulfide on copper wiring:

1) U.S. Patent 5,953,628 to Kawaguchi, "Method for Forming Wiring for a Semiconductor Device".

2) U.S. Patent 5,863,834 to Kawaguchi et al., "Semiconductor Device and Method of Manufacturing the Same."

U.S. Patent 6,040,243 to Li et al., "Method to Form Copper Damascene Interconnects Using a Reverse Barrier Metal Scheme to Eliminate Copper Diffusion," discloses a method of fabricating damascene vias.

U.S. Patent 6,335,570 to Mori et al., "Semiconductor Device and Manufacturing Method Thereof," discloses a semiconductor device capable of preventing diffusion of a particle of copper or the like which forms a conductive layer without any increase in the number of manufacturing steps.

Sincerely,

Stephen B. Ackerman,
Reg. No. 37761

Sheet 1 of 1

Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number (Optional)	Application Number
CS-99-332B	10/718,865
Applicant: Simon Choi et al.	
Filing Date: 11/21/03	Group Art Unit:

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5933758	8/3/99	Jain	438	687	5/12/97
	5693563	12/2/97	Teong	437	190	7/15/96
	5451542	9/19/95	Ashby	437	173	6/21/94
	5953628	9/14/99	Kawaguchi	438	635	1/27/98
	5863834	1/26/99	Kawaguchi et al.	438	625	3/4/97
	6040243	3/21/00	Li et al.	438	687	9/20/99
	6335570	1/1/02	Mori et al.	257	751	4/20/99

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

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ASSOCIATE POWER OF ATTORNEY

I hereby appoint Cheryl R. Figlin, registration number 39,562, as my associate attorney in this case. Her telephone number is (610) 821-0414.

Please continue to direct all correspondence in this case to the undersigned attorney.

Respectfully submitted,

Stephen B. Ackerman,

Principal attorney of record